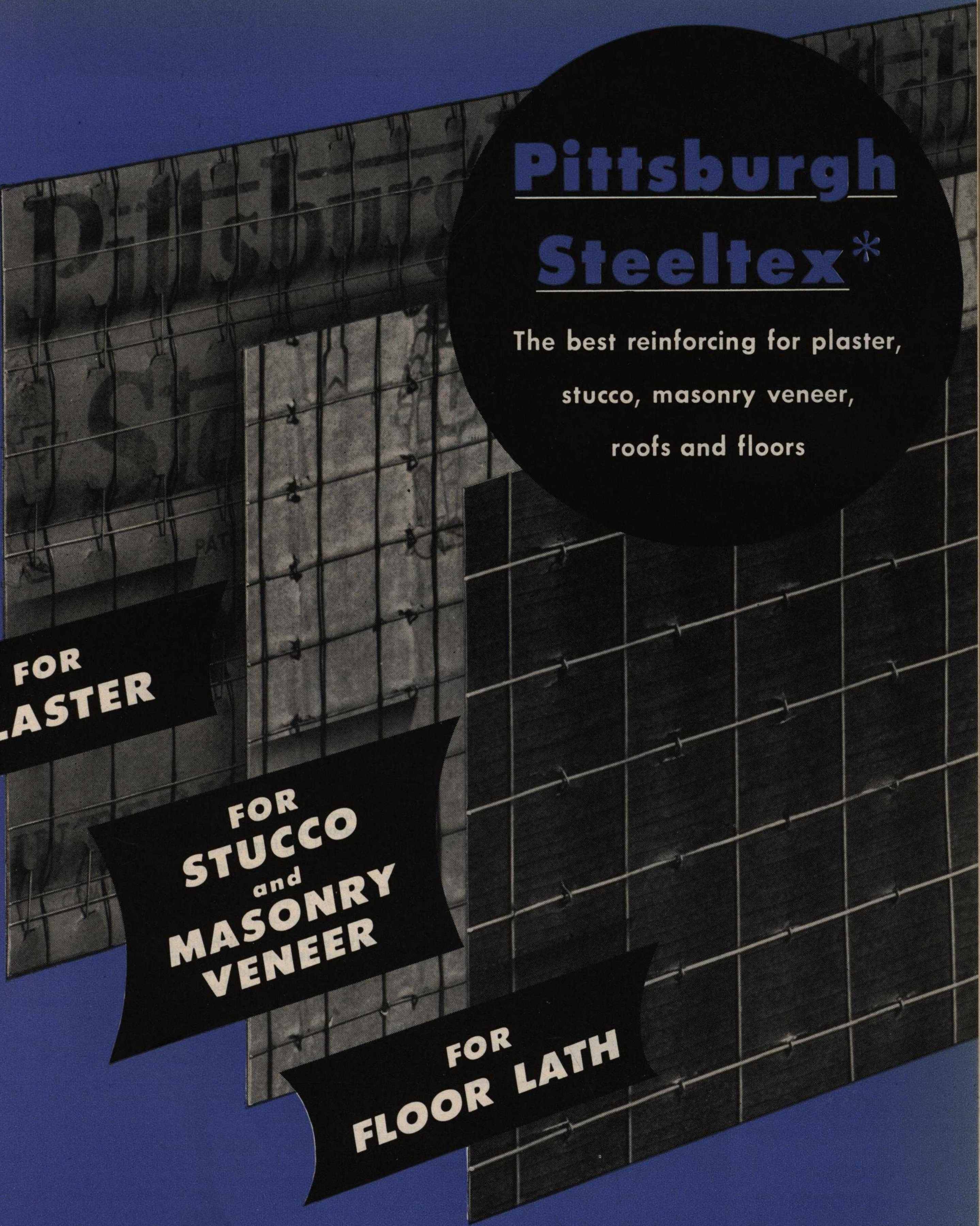
# Pittsburgh Steeltex*

The best reinforcing for plaster, stucco, masonry veneer, roofs and floors



**and welded wire reinforcement**

**Pittsburgh Steel Products Company**
A Subsidiary of Pittsburgh Steel Company
GRANT BUILDING • PITTSBURGH 30, PA.

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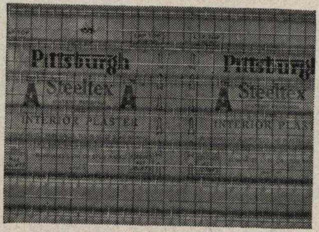
# PITTSBURGH STEELTEX PRODUCTS

## PLASTER (interior walls and ceilings)



Steeltex for Plaster (Type A) is a 2″ x 2″ mesh of welded wire reinforcing fabric secured to a specially made absorbent backing. Corrugations in the mesh form a steel truss extending the length of the Steeltex sheet, giving it a board-like rigidity. The absorbent backing is offset from the steel mesh to permit automatic embedment of the reinforcing in the plaster. It is absorbent enough to hold the wet mortar in place until it has set about the reinforcing wires.

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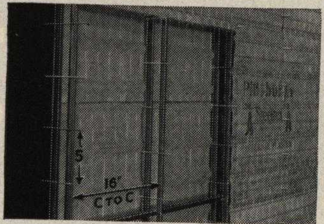
## PARTITIONS



Steeltex Hollow Partitions are constructed with Steeltex Studs (fabricated by joining two lines of channels with galvanized annealed wire prongs welded across legs of each channel at 5″ intervals). Studs are secured to floor and ceiling bearings. After erection, Steeltex for Plaster, Type A, is applied on both sides of the studs and attached to the studs by pressing the lath against the prongs so that they puncture the backing, then the prongs are bent over the reinforcing wires.

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## STUCCO

Steeltex 38-14 is a 2″ x 2″ mesh of welded wire reinforcing fabric secured to a waterproofed backing made of a double layer of paper, with layers cemented to each other by a layer of mastic compound.

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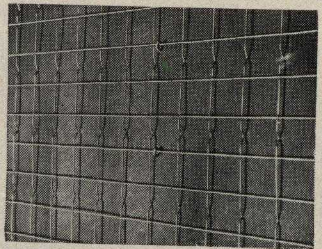

C-214 and C-216 (Self-Furring) reinforcing fabrics are steel wire meshes without backing. C-214 is made of 14-gauge and C-216 is made of 16-gauge wire. These types of reinforcing are recommended wherever the advantages of Steeltex backing are not required. They may be applied over wood or composition sheathing in new construction or over any type of old exterior walls in remodeling work. As both types are self-furring, there is no need for furring nails.

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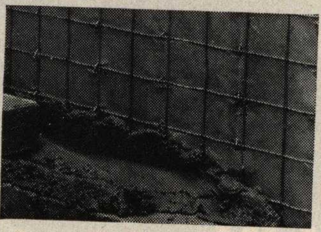
## MASONRY VENEER



Steeltex for Masonry Veneer is a combination of Welded wire reinforcing fabric and specially designed waterproofed backing. The reinforcing element is a welded wire (2″ x 2″ mesh) fabric. Attached to this fabric is a double-ply waterproofed backing with the layer cemented together by a mastic compound. The backing is fastened to the fabric by crimped stitch wires which permit it to fall away from the steel for automatic embedment of the reinforcing fabric.

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## FLOORS and ROOFS

Steeltex Floor Lath is composed of steel wire reinforcing mesh (3″ x 4″) which is attached to a tough cord-reinforced water resistant backing—the form element—by means of crimped stitched wires which also space the reinforcing mesh the proper distance from the backing to permit complete embedment of the reinforcement in the slab.

For Welded Wire Reinforcement for floors, roofs, walks, etc., see back cover.

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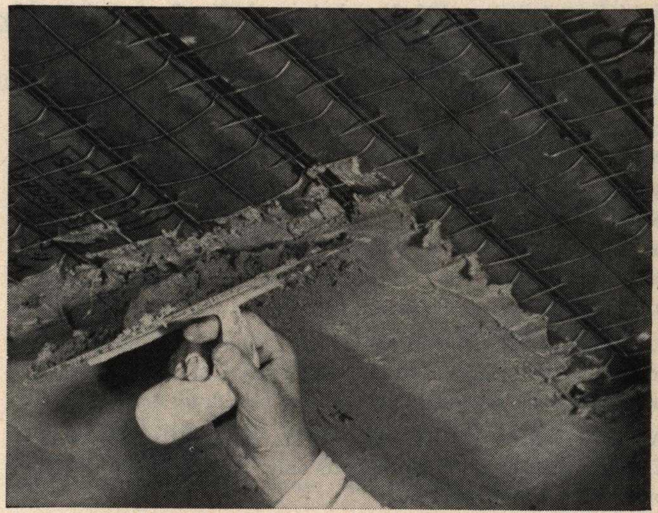
# STEELTEX (Type A) for Plaster

Type A Steeltex is designed to provide maximum effective steel reinforcing embedded in plaster slabs at relatively low cost. It is made of a 2″ x 2″ mesh, 16-ga., electrically welded, self-furring, galvanized steel wire fabric to which a fibrous absorbent backing is secured by stitch wires on 2″ centers. The reinforcing fabric is corrugated every 4⅜″, forming a steel truss extending the length of the Steeltex sheet. The wires extend beyond the fibrous backing to insure continuous reinforcing when the sheets are lapped.

Type A Steeltex is equally adaptable to all types of plaster construction, ranging from small residences to large fire-proof buildings. It has been tested by the Underwriters' Laboratories, Inc., of Chicago and awarded their one-hour fire rating. Steeltex sheets are shipped in strong fibreboard cartons which contain 50 sq. yds., weighing about 116 lbs., gross weight.

**application**—Steeltex for Plaster is attached to walls and ceilings with Steeltex Blued Nails, driven into each bearing on approximate 6″ centers so as to engage a reinforcing wire of the lath. There should always be wire to wire laps of not less than 1″ at all joints, with all joints staggered on both ceiling and side walls, so that four corners of adjacent sheets will not occur at any one place. Application should be started at one corner of the ceiling. Sidewalls shall be lathed from ceiling down so that all horizontal laps are made over top sheets. Plaster on Steeltex Type A should be finished to not less than ¾″ grounds.


Steeltex for Plaster gives effective reinforcement, distributing strains equally and reducing plaster cracking hazards to the minimum.

## Advantages of STEELTEX for Plaster (Type A)

**reinforced plaster**—Embedment of welded steel wire fabric in the plaster achieves construction similar in principle to reinforced concrete. This affords maximum protection against plaster cracks.

**automatic back-plastering**—All of the reinforcing steel is embedded in the plaster. Therefore the advantages of back-plastering are secured without extra expense.

**all angles and laps reinforced**—Type A is so designed that, when properly applied, the reinforcing steel extends around and protects all angles and corners. Similarly, the steel mesh extends across all laps, offering maximum protection against lap cracks.

**permanence**—The wire mesh is made of the highest quality reinforcing steel and, since the steel is galvanized and copper-bearing and all reinforcing steel is embedded in the plaster, there is maximum protection against rusting and corrosive action.

**high bond value**—The bond value between Steeltex, Type A, and sanded gypsum plaster is 830 lb. per sq. ft. This is a factor of safety over 100 assuring that bond failure will never occur.

**floating wall action**—The furring action of Steeltex separates the plaster slab from the framework, minimizing the contact between wet plaster and dry lumber. This is added protection against plaster cracks caused by swelling and distortion of the wood.

**no lath or stud marks**—The furring action also eliminates the possibility of unsightly stud marks from appearing on the finished surface. Lath marks do not occur over Steeltex.

**easy to bend and cut**—To form sharp, true ceiling and corner angles simply bend Steeltex over any convenient piece of board or scaffolding. Steeltex is readily cut with lather's No. 8 snips.

**easy to handle**—The sheets of Steeltex are boardlike in rigidity. They are of such size (30½″ x 49″) that one man can conveniently handle and apply them with a minimum of effort.

**instant bonding action**—The fibrous paper backing of Steeltex is especially designed to bond instantly with the wet mortar. This bonding action is of particular advantage to the plasterer when working on overhead surfaces.

**boardlike rigidity**—There is less deflection of the lath under the pressure of the trowel which makes for greater speed in the application of the scratch coat.

**no plaster wasted in keys**—Since Steeltex provides automatic back-plastered construction there are no plaster keys.

**less waste in labor and material**—Greater plaster coverage is secured because Steeltex is a rigid lath. Moreover the plasterer trowels against a rigid surface with no waste in plaster droppings. This results in outstanding economies in the use of sand and neat gypsum, in addition to reducing labor costs.

## Lathing Specifications for Ceilings and Side Walls over Wood Framing

All interior wall, partition and ceiling surfaces, where plaster finish over lath is specified or designated, shall be lathed with Pittsburgh Steeltex for Plaster, Type A (2″ x 2″ mesh, 16-ga., copper-bearing, cold-drawn, electrically-welded, galvanized, self-furring steel wire fabric, to which an absorbent backing is secured by means of 17-ga. galvanized stitch wires on 2″ centers, with stiffening ribs formed in fabric on not more than 5″ centers).

Steeltex shall be attached to wood supports with Steeltex Blued Nails (U-shaped head, 12-ga. by $1\frac{7}{16}$″), spaced not to exceed 6″ on centers and driven to a penetration of not less than 1″ into each stud or joist. The U-shaped head of each nail shall encircle a reinforcing wire of the lath.

Lath shall be erected with ribs at right angles to supports. End joints shall be staggered so that four corners of the sheets shall not occur at any one place.

All laps shall be 1″ and made so that wire laps against wire. End laps shall be made on supports only. Side laps shall be tied once between supports.

Lath shall first be applied to ceilings and bent at ceiling angle to form a drop or apron down side walls at least 4″. Side walls shall be lathed from ceiling down so that all side laps are made over upper sheets and lath shall be bent around all corners to prevent joints at the juncture of walls, or lath may be butted at angles and corners and corner reinforcing applied.

Where any wall, partition, or ceiling abuts masonry, the lath shall extend over the masonry at least 6″ beyond the joint. This extension shall have a selvage edge of at least 2″ and be nailed to the masonry, or the lath may be butted and corner or joint reinforcing applied.

*Note:* To secure a $\frac{1}{2}$″ thickness of plaster over the face of the lath, apply plaster to full $\frac{3}{4}$″ grounds; to secure $\frac{5}{8}$″ thickness of plaster, apply to $\frac{7}{8}$″ grounds; to secure $\frac{3}{4}$″ thickness of plaster, apply to 1″ grounds.

Other types of nails may be used provided they penetrate the wood bearing members a full 1″ and securely engage the horizontal wire in the bottom of a rib. This would include: $1\frac{1}{4}$″ hook-head lath nails, $1\frac{1}{4}$″ blued plasterboard nails with $\frac{7}{16}$″ head, and $1\frac{1}{4}$″ blued metal lath staples. These nails shall be driven into each stud or joist at every rib of the lath.

## Specifications for Erecting and Lathing Suspended Ceilings

Plastered ceilings, suspended from flat slab, arches, pan system, or other similar floor construction, shall be lathed with Pittsburgh Steeltex for Plaster, Type A (2″ x 2″ 16-ga., cold-drawn, electrically-welded, galvanized, copper-bearing, self-furring steel wire fabric, to which an absorbent backing is secured by means of 17-ga., galvanized, stitch-wires on 2″ centers, with stiffening ribs formed in the fabric on not more than 5″ centers).

**hangers**—Hangers shall be placed not to exceed 4 ft. centers in either direction. The minimum size for hangers shall be No. 8-ga. galvanized wire, 1″ x $\frac{3}{16}$″ flats, or $\frac{7}{32}$″ round, mild steel rods. Hangers shall be long enough to wrap around beams or to provide suitable anchorage in the concrete or tile. Where steel beams or purlins are on not more than 4 ft. centers, hangers may be attached directly to them.

When hangers are hung from concrete beams or arches, they shall be placed before the concrete is poured. When hung from terra cotta floors, they shall be installed at tile joints during erection, or (when tile is already in place) in holes bored through the tile and secured on the upper side by toggle bolts or steel rods.

**runner channel**—Runner channels not less than $1\frac{1}{2}$″, weighing not less than 442 lb. per thousand linear feet shall be suspended the required distance from the floor slab and shall be spaced not to exceed 4 ft. centers. When wire hangers are used, runner channels shall be securely tied to the lower end of the hanger wires by at least three twists. The lower end of the rod hangers shall be secured to the runner channels by at least two twists or by wire-tieing them. When flat hangers are used, the runner channels shall be bolted to them with $\frac{3}{8}$″ diameter bolts, with flat side of runner channel against the hanger.

**furring channel**—Furring channel shall be $\frac{3}{4}$″ Steeltex Prong Channels having a minimum weight of 300 lb. per thousand linear feet. They shall be spaced not more than 16″ on centers, placed at right angles to the runner channels and securely saddle-tied by at least three strands of 16-ga. galvanized, annealed wire at each crossing or by No. 9 wire hairpin clips.

Lath shall be erected with ribs at right angles to the $\frac{3}{4}$″ prong channels and shall be secured to them by pressing the lath against the prongs so that they puncture the backing. When the lath rests against the prong channels, the prongs shall be bent over the reinforcing wires and their ends pressed in firmly.

**plastering suspended ceilings**—End joints shall be staggered so that four corners of the sheets shall not occur at any one place.

All laps shall be 1″ and made so that wire laps against wire. End laps shall be made on supports only. Side laps shall be tied once between supports.

Lath shall be bent at ceiling angle to form a drop or apron down the side walls at least 4″ or the lath may be butted at angles and corner reinforcing applied.

Where ceiling abuts masonry the lath shall extend over the masonry at least 6″ beyond the joint. This extension shall have a selvage edge of at least 2″ and be nailed to the masonry or the lath may be butted and corner reinforcing applied.

## Lathing Specifications for Side Walls and Ceilings over Structural Steel Framing or Steel Joists

All interior furred wall, partition and ceiling surfaces, where plaster finish over lath is specified or designated, shall be lathed with Pittsburgh Steeltex for Plaster, Type A (2″ x 2″ mesh, 16-ga., copper-bearing, cold-drawn, electrically-welded, galvanized, self-furring steel wire fabric to which an absorbent backing is secured by means of 17-ga. galvanized stitch wires on 2″ centers, with stiffening ribs formed in the fabric on not more than 5″ centers).

Steeltex V-shaped Attachment Bars (19-ga. Attachment Bars where supports are spaced 24″ or less; 16-ga. Attachment Bars where supports are spaced 25″ to 36″) shall be placed at right angles to the supports and spaced not more than 16″ on centers, and shall be securely tied with a double strand of 14-ga. galvanized annealed wire to each support or securely attached to the flanges of rolled section members with clips which hook over the flange of each member.

Lath shall be erected with ribs at right angles to the Attachment Bars and shall be secured to Attachment Bars by pushing lath against the prongs so that they puncture backing. When lath rests against the Attachment Bars, prongs shall be bent over the reinforcing wires of the lath and their ends pressed in firmly.

End joints shall be staggered so that four corners of the sheets shall not occur at any one place.

All laps shall be 1″ and made so that wire laps against wire. End laps shall be made on Attachment Bars only. Side laps shall be tied once between supports.

Lath shall be bent at all ceiling angles to form a drop or apron down the sidewalls at least 4″, or lath may be butted at angles and corner reinforcing applied.

Sidewalls shall be lathed from ceiling down so all horizontal laps are made over upper sheets. Lath shall be bent around all corners to prevent joints at juncture of walls, or lath may be butted at all corners and corner reinforcing applied.

Where any wall or partition or ceiling abuts masonry, lath shall extend onto masonry at least 6″ beyond the joint. This extension shall have a selvage edge of at least 2″ and be nailed to masonry, or lath may be butted and corner or joint reinforcing applied.

*Note:* To secure 1″ thickness of plaster over the face of the lath, apply plaster to full ¾″ grounds; to secure ⅝″ thickness of plaster, apply ⅞″ grounds; to secure ¾″ thickness of plaster apply to 1″ grounds.

## Lathing Specifications for Ceilings Attached to Steel Joists

All furred ceilings, where plaster finish is specified or designated, shall be lathed with Pittsburgh Steeltex for Plaster, Type A (2″ x 2″, 16-ga., cold-drawn, electrically welded, galvanized, copper-bearing, self-furring steel wire fabric, to which an absorbent backing is secured by means of 17-ga. galvanized stitch wires on 2″ centers, with stiffening ribs formed in the fabric on not more than 5″ centers).

Lath shall be erected with ribs at right angles to the Attachment Bars and shall be secured to them by pushing the lath against the prongs so that they puncture the backing. When the lath rests against the Attachment Bars, the prongs shall be bent over the reinforcing wires of the lath and their ends pressed firmly.

End joints shall be staggered so that four corners of the sheets shall not occur at any one place.

All laps shall be 1″ and made so that wire laps against wire. End laps shall be made on Attachment Bars only. Side laps shall be tied once between supports.

Lath shall be bent at ceiling angles to form a drop or apron down the sidewalls at least 4″, or lath may be butted at angles and corner reinforcing applied.

Where ceiling abuts masonry the lath shall extend over the masonry at least 6″ beyond the joint. This extension shall have a selvage edge of at least 2″ and be nailed to the masonry, or the lath may be butted and corner reinforcing applied.

## Hollow Partitions

Steeltex 4″ Hollow Partitions construction with 2¼″ Pittsburgh Steeltex Studs (fabricated by joining together two lines of ¾″ channels with 12½″ gauge galvanized annealed wire prongs welded across the legs of each channel at 5″ intervals).

The Steeltex Studs are then secured to the floor and ceiling bearings by runner channels, nailing, ceiling or floor brackets or by holes cut into the concrete floor and ceiling. After erection of the partition studs, Pittsburgh Steeltex for Plaster, Type A, is applied on both sides of the studs by starting at the ceiling and lathing down to the floor. The Steeltex is attached to the studs by pressing the lath against the prongs so that these prongs puncture the backing. When the lath is resting against the studs, the prongs are then bent over the reinforcing wires of the lath and their ends pressed in firmly.

As the Steeltex is readily bent to any shape desired, these Steeltex 4″ Hollow Partitions are extremely versatile and can be successfully used in practically any shape room regardless of obstructions which would otherwise prevent partitioning.

# Specifications for Erecting and Lathing 4" Steeltex Hollow Partitions

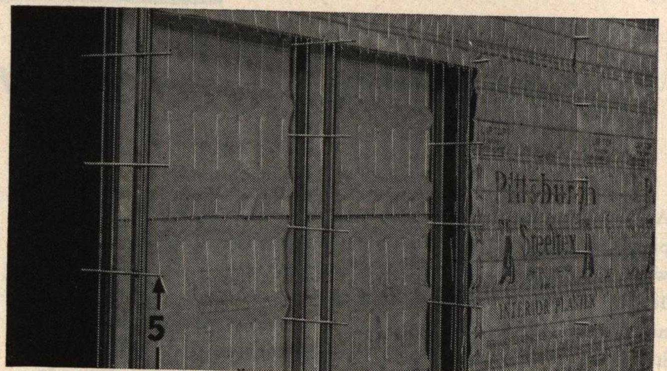
Steeltex 4" Hollow Partitions shall be constructed with 2¼" Pittsburgh Steeltex Studs (Steel studs fabricated by joining together two lines of ¾" channels with 12½ ga. galvanized annealed wire prongs welded across the legs of each channel at 5" intervals. The wire prongs are at least 4¾" long so they extend not less than 1¼" beyond each edge of the stud which has an overall depth of 2¼").

The Steeltex Studs shall be spaced as follows: on 16" centers for partition heights up to and including 9 ft.; on 12" centers for partition heights from 9 ft. up to and including 12 ft.; and on 8" centers for partition heights exceeding 12 ft. Maximum stud height shall be 16 ft.

All partitions shall be permanently braced with ¾" channels weighing not less than 300 lb. per 1000 ft., placed horizontally within the partition and securely "wire-tied" to each stud at all points of intersection with the studs. When the partition is 9 ft. or less in height, two lines of horizontal bracing channel shall be used at distances of 3 ft. and 5 ft. from the floor line. When the partition is from 9 ft. up to and including 12 ft. in height, three lines of horizontal bracing channel shall be used at distances of 3 ft., 5 ft. and 7 ft. from the floor line. When the partition exceeds 12 ft. in height, the horizontal bracing channel shall be located at distances of 3 ft., 5 ft., 7 ft. and 10 ft. from the floor line with additional braces at 3-ft. intervals to within 3 ft. of the ceiling.

The Steeltex Studs shall be secured to the floor and ceiling bearings by runner channels, nailing, ceiling or floor brackets or by holes cut into the concrete floor and ceiling.

After the partition studs have been erected plumb and true, Pittsburgh Steeltex for Plaster, Type A (2" x 2" mesh, 16-ga., cold-drawn, electrically-welded, galvanized, copper-bearing, self-furring steel wire fabric, to which a tough fibrous backing is secured by means of 17-ga. stitch wires on 2" centers, with stiffening ribs formed in fabric on not more than 5" centers) shall be applied on both sides of the studs by starting at the ceiling and lathing down to the floor, so that all side laps are made over the bottom edge of the upper sheets. Ribs of the lath shall be at right angles to the studs. The Steeltex shall be attached to the studs by pressing the lath against the prongs so that they puncture the backing. When the lath rests against the studs, the prongs shall be bent over the reinforcing wires of the lath and their ends pressed in firmly.



Light weight and rigid walls can be constructed with Steeltex Partition Studs. Prongs on the studs engage the reinforcing mesh of Steeltex by piercing the backing.

End Joints of the lath shall be staggered so that four corners of the sheets shall not occur at any one place. All laps shall be 1" and made so that wire laps against wire. End laps shall be made on studs only. Side laps shall be tied once between supports. When partition abuts masonry, lath shall extend over masonry at least 6" beyond the joint. This extension shall have a selvage edge of at least 2" and be nailed to the masonry, or the lath may be butted and corner or joint reinforcing applied.

# Pittsburgh Steeltex for Stucco

Reinforced Portland Cement Stucco is recognized as one of the most reliable building materials available for exterior wall surfaces. It is fireproof, durable, distinctive in appearance, and economical in upkeep. Stucco is adaptable to all types of new construction, ranging from small homes to large monumental type buildings. It also affords a simple and inexpensive means of remodeling and modernizing old structures by "overcoating." Reinforced Portland Cement Stucco reduces fire hazards to a minimum. Action of the elements will not cause Portland Cement Stucco to deteriorate. When properly flashed and applied over a waterproof backing, it offers effective resistance to air and moisture infiltration.

Stucco is adaptable to almost any type of architecture. An artistic and attractive appearance is readily obtained in either plain effects or by use of various colors and surface textures.

The initial cost is comparable to the lowest priced exterior wall surface. Upkeep costs are low, as there is nothing to repair or paint except a small amount of wood trim.

## *stucco reinforcing*

**Styles:** There are six different styles of Pittsburgh Reinforcements for exterior walls. Slight variations of their final form are made necessary by the differing requirements of the many types of exterior construction over which lath for stucco is applied and by varying trade practices throughout the country.

The styles of Steeltex for Stucco, with waterproof backing attached, are: Steeltex 38-14 and Steeltex 38-16.

Styles with no backing attached are: Self-furring C-214 and C-216, Welded Wire Reinforcements AA-1414 and AA-1616.

**Choice of Styles:** The choice of specific styles of Steeltex or Pittsburgh Reinforcing Laths for Stucco is dependent upon the type of construction involved and the methods of applications contemplated. The economies offered by one style, as contrasted by another in a specific application, will also effect the choice. Complete application directions for each of these reinforcing laths for Stucco are available upon application.

The following table describes the various styles of Pittsburgh Steeltex and Reinforcement Fabrics and indicates the type of construction to which they are applicable.

## Specifications

### stucco base over wood framing

### (Direct to Stud Construction)

**scope of work**—Here, list and locate all of the respective areas to be covered.

**framing**—All framing shall be spaced accurately (12″)—(16″) on centers.

**material**—Stucco Reinforcing Lath—The stucco lath shall be Pittsburgh Steeltex (Style 38-14)—(Style 38-16) delivered to the building site in the original manufacturer's packages.

**application**—General—Pittsburgh Steeltex (Style ....) shall be attached direct to studs starting the first width at the sill line and extend around building. The second width shall lap the first at least 2″ (shingle fashion), lapping wire against wire. All horizontal laps midway between studs shall be tied with an 18-ga. tie wire. Vertical joints shall be staggered and lapped 3″ over a stud with a 2″ strip of backing along edge of one piece cut away to form a selvage edge of wires which overlap the preceding piece. Vertical joints shall not be made at corners under or over openings.*

Lath shall be bent around all corners and nailed to the first stud beyond the corner. It shall be carried up to the openings or under the molding of all doors and windows. For added protection at the corners of window and door openings, remove the backing from an 8″ by 12″ strip of lath and apply the wire mesh diagonally to provide double reinforcing.

**nails**—The Steeltex Reinforcing Lath shall be nailed with Steeltex Furring nails placed over the horizontal wires at 6″ intervals vertically on each stud and driven to penetrate not less than 1″. Nail around all door and window openings at 4″ intervals.

*If Steeltex sheets are used, all laps shall be at least 1″ and the sheets placed so that the shortest dimension extends across the studs.

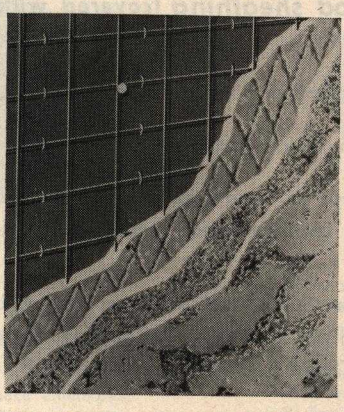
*Note:* Stucco placed over Steeltex shall be applied in three coats to a total thickness of at least 7/8″ in accordance with specifications of the Portland Cement Association.

### stucco base over wood sheathing

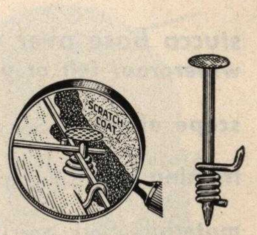
**scope of work**—See paragraph under "wood framing."

**framing**—See paragraph under "wood framing."

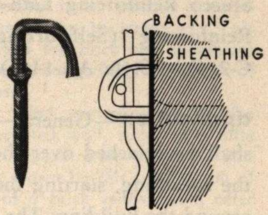
**material**—*Note:* Specify type of wood sheathing (waterproof felt or building paper not required), and method of application, nails, flashing, etc.



This diagramatic built-up wall section shows actual embedment of the wires in the stucco.



Steeltex furring nails insure positive embedment of the reinforcing mesh.



Steeltex galvanized nails are designed for use with self-furring reinforcements C-214 and C-216.

Stucco Reinforcing Lath—The Stucco Lath shall be Pittsburgh Steeltex (Style 38-14)—(Style 38-16) delivered to building site in original manufacturer's package.

**application**—General—Steeltex (Style ...) shall be attached direct to the sheathing starting the first width at the sill line and extend around the building. The second width shall lap the first at least 2″ (shingle fashion), lapping wire against wire. Vertical joints shall be staggered and lapped 3″ with a 2″ strip of backing along the edge of one piece cut away to form a selvage edge of wires which overlap the preceding piece. The vertical joints shall not be made at corners under or over openings.*

Lath shall be bent around all corners at least 12″. It shall be carried up to the openings or under the molding of all doors and windows. For added protection at the corners of window or door openings, remove the backing from an 8″ by 12″ strip of lath and apply the wire mesh diagonally to provide double reinforcing.

**nails**—The Steeltex Reinforcing Lath shall be nailed with Steeltex Furring Nails placed over the horizontal wires at 8″ intervals in each direction and driven to a penetration of not less than 1″. Nail around all door and window openings at 6″ intervals.

*If Steeltex sheets are used, all laps shall be at least 1″ and sheets placed so that shortest dimension extends across studs.

*Note:* Stucco placed over Steeltex shall be applied in three coats to a total thickness of at least 7/8″ in accordance with specifications of the Portland Cement Association.

# Steeltex for Stucco

## stucco base over wood sheathing (covered with waterproof felt or paper)

**scope of work**—See paragraph on "wood framing."

**framing**—See paragraph on "wood framing."

**material**—*Note:* Specify type of wood sheathing, weight and grade of waterproof felt or building paper, method of application, nails, flashing, etc.

Stucco Reinforcing Lath—The Stucco Lath shall be Pittsburgh Reinforcing (Self-furring Style C-214) — (Self-furring Style C-216)—(Style AA-1414)—(Style AA-1616).

**application**—General—Pittsburgh Reinforcing (Style ....) shall be attached over the waterproof felt or building paper to the sheathing, starting the first width at the sill line and extend around the building. The second width shall lap the first at least 2″ (shingle fashion). Vertical joints shall be staggered and lapped 3″ over a stud and shall not be made at the corners under or over openings. The lath shall be bent around all corners at least 12″. It shall be carried up to the openings or under the moldings of all doors and windows. For added protection at the corners of window or door openings, an 8″ x 12″ strip of the lath shall be applied diagonally to provide double reinforcing.

**nails**—(for Style C-214 or C-216 use following specifications)—The reinforcing lath shall be nailed with Steeltex Galvanized Nails placed over the horizontal wires at 6″ intervals vertically on each stud and driven to a penetration of not less than 1″. Nail around all door and window openings at 6″ intervals.

(for Style AA-1414 or AA-1616 use following specifications)—The reinforcing lath shall be nailed with Steeltex Furring Nails placed over the horizontal wires at 8″ intervals in each direction and driven to a penetration of not less than 1″. Nail around all door and window openings at 6″ intervals.

*Note:* Stucco placed over Pittsburgh Reinforcing shall be applied in three coats to a total thickness of at least 7/8″ in accordance with specifications of Portland Cement Association.

## stucco base over composition sheathing

**scope of work**—See paragraph under "wood framing."

**framing**—See paragraph under "wood framing."

**material**—*Note:* Specify type of composition sheathing, method of application, nails, flashing, etc. Steeltex Style 38-14 or 38-16 is recommended over sheathing that requires waterproof felt or building paper. If waterproof felt or building paper is omitted, Self-furring Style C-214 or C-216 is recommended.

Stucco Reinforcing Lath—The Stucco Lath shall be Steeltex (Style 38-14)—(Style 38-16)—(Style C-216)—(Style C-214).

**application**—(for Style 38-14 or 38-16 use following specifications)—General—Pittsburgh Steeltex (Style ....) shall be applied over the sheathing starting the first width at the sill line and extend around the building. The second width shall lap the first at least 2″ (shingle fashion), lapping wire against wire. Vertical joints shall be staggered and lapped 3″ over a stud with a 2″ strip of backing along the edge of one piece cut away to form a selvage edge of wires which overlap the preceding piece. The vertical joints shall not be made at corners under or over openings.

Lath shall be bent around all corners and nailed through the sheathing into the first stud beyond the corner. It will be carried up to the openings or under the molding of all doors and windows. For added protection at the corners of window or door openings, remove the backing from an 8″ x 12″ strip of lath and apply the wire mesh diagonally to provide double reinforcing.

(recommended specification for Self-furring reinforcement Styles C-214 or C-216)

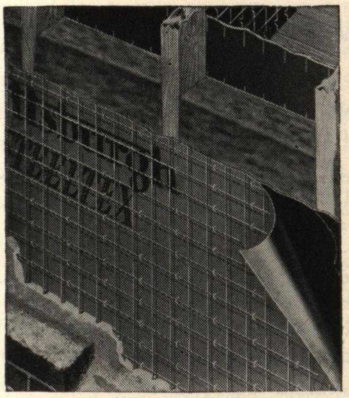
General—Pittsburgh Reinforcing (Style ....) shall be applied over the sheathing starting first width at sill line and extend around the building. The second width shall lap first at least 2″ (shingle fashion). Vertical joints shall be staggered and lapped 3″, and shall not be made at corners under or over openings.

Lath shall be bent around all corners and nailed through the sheathing into the first stud beyond the corner. It shall be carried up to the openings or under the molding of all doors and windows. For added protection at the corners of window or door openings, an 8″ x 12″ strip of the lath shall be applied diagonally to provide double reinforcing.

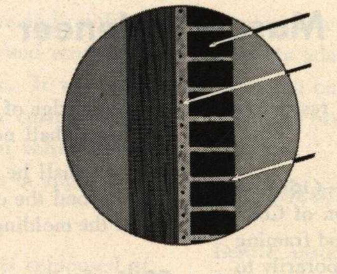
**nails**—(for Style 38-14 or 38-16 use the following specifications)—The Steeltex Reinforcing lath shall be nailed with Steeltex Furring Nails (length 2″) placed over the horizontal wires at 6″ intervals vertically on each stud. The nails shall be driven through the composition sheathing and into the bearing members not less than 1″. Nail around all door and window openings at 4″ intervals.

(for Style C-214 or C-216 use the following specifications)—The reinforcing lath shall be nailed with Steeltex Galvanized Nails (12 gauge 2 3/16″ long) placed over the horizontal wires at 6″ intervals vertically on each stud. The nails shall be driven through the composition sheathing so as to extend into the bearing members not less than 1″. Nail around all door and window openings at 4″ intervals.

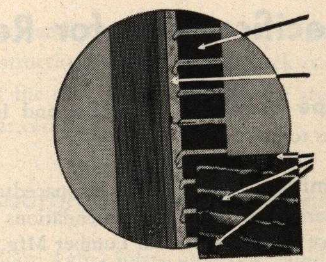
*Note:* Stucco placed over Steeltex or Pittsburgh Self-furring Reinforcements shall be applied in three coats to a total thickness of at least 7/8″ in accordance with specifications of the Portland Cement Association.



Masonry veneer application over Steeltex, showing how reinforcing steel becomes embedded in cement mortar between veneer wall and Steeltex.



1. The brick wall is built as an integral part of the structure.
2. The brick is bonded to a one inch slab of cement mortar which in turn is permanently reinforced by heavy galvanized steel wires. Air space eliminated.
3. Properly filled mortar joints are assured and heavy waterproofed backing adds further protection to the penetration of wind and rain.



1. The brick wall is free standing, separated from the framework and fastened by means of metal ties.
2. When Steeltex is not used, it is necessary for the mason to leave a 1″ air space between the brick and sheathing. This becomes a dangerous flue in case of interior fires.
3. Partially filled vertical joints on the inside of the brick wall, which offer little barrier to the penetration of the air and moisture as shown by this photograph of the inside of a brick veneer wall, after a fire.

## Reinforced Masonry Veneer Construction

The Steeltex system of reinforced masonry veneer incorporates modern engineering practices and provides a steel reinforced masonry wall which is sound, durable, and economical in completed cost. Pittsburgh Steeltex reinforced masonry veneer offers what might accurately be termed "a reinforced monolithic" wall in that the brick or stone is actually cast into a steel reinforced cement slab which becomes an integral part of the complete masonry, yet does not necessitate any radical change in present building methods.

### *Steeltex for Masonry Veneer (38-16)*

Steeltex for Masonry Veneer (Style 38-16) is a combination of steel reinforcing fabric and specially designed waterproofed backing. The reinforcing element is a network of 16-gauge, galvanized, copper-bearing steel wires, electrically spot-welded together on 2″ centers to form a welded wire fabric. Attached to the fabric is a double-ply waterproofed backing with the layers cemented together and further waterproofed by a mastic compound between. The backing is fastened to the fabric by crimped stitch wires which permit it to fall away from the steel reinforcement 3/8 of an inch.

It is supplied in rolls 49 in. wide and 110½ ft. long, containing 50 square yards and weighing 104 pounds per roll, gross weight. Construction of Masonry Veneer wall with Steeltex requires no radical change in building methods. The Steeltex is first nailed direct to the wood studding, shingle fashion. The masonry is then laid up aproximately 1″ from the framework; however, this 1″ space is filled with bricklayer's cement mortar as each course is laid. The mortar flows around the Steeltex reinforcing wires, completely embedding them. Steeltex Veneer Construction provides three outstanding advantages: (1) A reinforced cement sheathing approximately 1″ thick, of which the brick or stone facing becomes an integral part; (2) elimination of the 1″ air space between the veneer and sheathing, thereby reducing the fire hazard and preventing the circulation of air currents within the walls; (3) effective retarding of the infiltration of air and moisture by automatically overcoming the possibility of partially filled vertical mortar joints.

### *Steeltex Super-Wall System*

This system of exterior wall construction is a combination of: (1) Reinforced monolithic exterior masonry walls; (2) Efficient insulating material placed between the studs; and (3) Reinforced interior plastered surfaces. This system provides greater structural strength, comfort and fire-safety.

**advantages**—The Steeltex Super-Wall System provides certain advantages which are a definite contribution to modern building construction. These advantages have been proved by many satisfactory installations and the system has been tested and approved by leading architects, engineers, and building contractors. The major benefits of the Steeltex Super-Wall System are as follows:

Strong Reinforced Sheathing
Greater Fire Protection
Protection Against Infiltration of Air and Moisture
Economical in Cost
Increase in Home Comfort
Reduction in Fuel Costs
Greater Sound Insulation
Reinforced Plaster Walls
Reduction in Maintenance Costs
Increased Resale Value

Despite the numerous advantages which the Steeltex Super-Wall System provides, its completed cost compares favorably with other methods of masonry veneer construction and only standard materials and methods are employed.

# STEELTEX for Masonry Veneer

## Specifications for Reinforced Masonry Veneer Construction

**scope of work**—Here, list and locate all of the respective areas to be covered.

**framing**—Framing shall be spaced accurately (12″)—(16″) on centers. (Standard recommendations of the U. S. Dept. of Commerce and the National Lumber Mfg. Assn. for all wood framing should be followed.) All framing shall be braced temporarily to hold it plumb and in alignment until brick work has been completed.

**materials**—(Brick)—(Stone)—Specify type of brick or stone, sizes, shapes, quality, color, finish, etc.

**mortar**—All mortar shall be mixed by measured volume in the proportions of one part Portland Cement, three parts clean, sharp sand, and 10 per cent hydrated lime.

**reinforcing sheathing**—The sheathing shall be Pittsburgh Steeltex Style 38-16 delivered to the building site in the original manufacturer's packages.

**application**—General—Pittsburgh Steeltex Style 38-16 shall be attached direct to studs. Start first width at sill line and extend around building. The second width shall lap first at least 2″ (shingle fashion), wire to lap against wire. All horizontal laps midway between studs shall be tied with an 18-ga. tie wire. Vertical joints shall be staggered and lapped 3″ over a stud with a 2″ strip of backing along edge of one piece cut away to form a selvage edge of wires which overlap the preceding piece. Vertical joints shall not be made at corners under or over openings.

Steeltex shall be bent around all corners and nailed to the first stud beyond the corner. It shall be carried up to the openings or under the molding of all doors and windows.

**nails**—Steeltex reinforcing sheathing shall be nailed with Steeltex Furring Nails placed over horizontal wires at 6″ intervals vertically on each stud and driven to penetrate not less than 1″. Nail around all door and window openings at 4″ intervals.

**placing masonry veneer**—The (brick)—(stone) veneer shall be of one course. Back of (brick)—(stone) shall be laid 1″ from face of studs. Space between the Steeltex and the veneer surface shall be filled with cement mortar as each course is laid. The (brick)—(stone) shall be laid in full beds of the same mortar with the back-up mortar well spaded in with the trowel, so as to assure bond of veneer surface and Steeltex.

### *Super-Wall System*

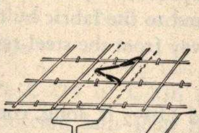
Specifications for the Super-Wall System are the same as for Reinforced Masonry Construction, plus specifications for installing insulation (see our publication DS-132) and Steeltex for Plaster Type "A."

Over Wood Framing (see Page 4 of this catalog).

# STEELTEX for Floors

Steeltex in roll form is easily laid and provides a safe walking surface once it has been attached to the joists.

Clipping to joists after Steeltex floor lath has been drawn taut.



Detail showing method of installing floor lath clips.

Steeltex floor lath assures a minimum amount of sag while the concrete is being poured.

# STEELTEX for Floors

Pittsburgh Steeltex Floor Lath is a combined form and reinforcing which offers important structural advantages and economies in light-slab concrete floor and roof construction. It will give maximum reinforcing value and facilitate proper curing of the concrete through the maintenance of the original water-cement ratio, at the same time effecting important savings in application cost and in the reduction of loss of material.

The reinforcing element of Steeltex Floor Lath is composed of 12-ga. electrically-welded, galvanized steel wire reinforcing mesh. This mesh is attached to a tough cord-reinforced water resistant backing by crimped stitch wires which also space the reinforcing mesh the proper distance from the backing to permit complete embedment of the reinforcement in the slab.

The cord-reinforced backing is of ample strength not only to support the concrete while it is being poured, but also to afford a safe walking surface, once Steeltex has been attached to joists. Being water-resistant, the backing minimizes loss of water and fine aggregate through leakage, with a further advantage in the protection it affords to floors below. Droppings are minimized, clean-up expense is eliminated, and work can proceed in safety even while the concrete is being placed on the floor above.

## Advantages of Steeltex method of application

The laying of Steeltex Floor Lath is accomplished with a minimum of time and labor. The conveniently handled rolls 4 ft. wide x 125 ft. in length, are simply unrolled over joists and cut to length. It is then attached to end joists drawn taut with a stretcher furnished for this purpose and fastened by clips to the intermediate joists.

The speed of work is also facilitated by the ability to cut openings for pipes, etc., with snips or knife instead of saw, chisel and auger. Rolls can be more quickly laid per unit or area than can sheets, and with less waste, since overlapping is minimized.

Properly installed, there is no excessive sag when concrete is being poured, effecting considerable saving. Steeltex Floor Lath extends in one piece across the entire panel or bay, giving lateral stiffness, continuity of reinforcing and distribution of loads over a number of joists or beams. The automatic embedding of the steel wire fabric in the concrete, coupled with its scientific design and spacing provides maximum reinforcing value and promotes development of the full strength of the slab.

## Equally adaptable to floors and roofs

The advantages of Steeltex Floor Lath as a reinforcement and form for light-slab floor construction apply equally in the construction of concrete and gypsum roofs. The material is easily laid on sloping or curbed roof surfaces and the fibrous backing is particularly adapted to roof construction, since it helps check condensation on the underside of the slab, thus protecting the steel joists and beams and the plaster ceiling beneath.

## Specifications for Pittsburgh Steeltex Floor Lath

Before installing Steeltex Floor Lath, joists shall be rigidly bridged and end joists securely anchored in accordance with Steel Joist Institute specifications.

Steeltex Floor Lath (a 3″ x 4″ mesh, 12-ga. cold-drawn, electrically-welded, galvanized wire fabric, attached to a cord-reinforced water-resistant backing, furnished in rolls 4′ x 125′) shall be unrolled across the joists to the desired length from the outer or bearing walls of the building, and shall be fastened every 12″ along the end joist with special clips furnished with the Steeltex.

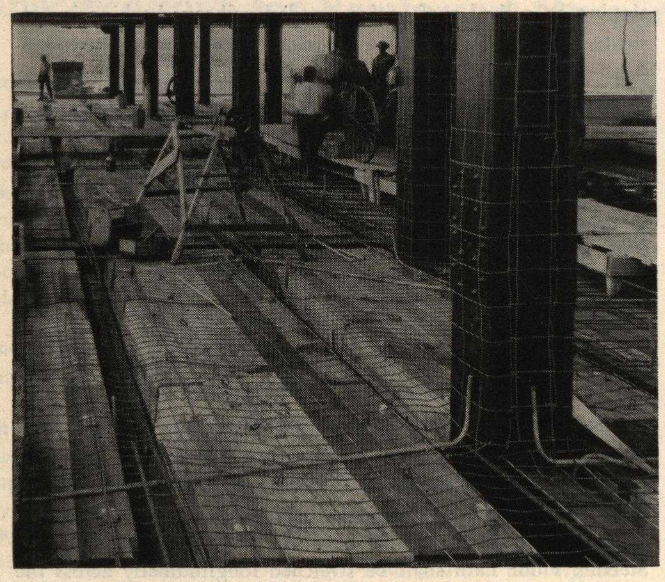
Steeltex Floor Lath shall be stretched longitudinally across the joists by a special stretcher, and clipped securely every 12″ along the bearing to which the stretcher is attached. Steeltex Floor Lath shall then be clipped to each intermediate joist with two clips when joists are spaced 16″ and over, and one clip per width of roll for joist spacing under 16″. Each clip shall face in the opposite direction from the clip adjacent to it.

Where end laps are necessary, Steeltex Floor Lath shall be lapped at least 1 ft., directly over a joist. Side laps shall be not less than 4″.

*Note:* Write PITTSBURGH STEEL PRODUCTS COMPANY, Grant Building, Pittsburgh, Pa., for installation instructions and test information.

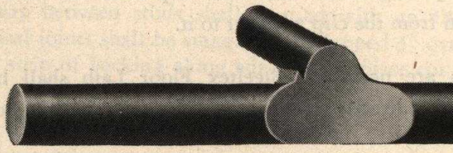
General view of Steeltex Floor Lath in place.

# Welded Wire Reinforcement for Floors



Floor and column reinforcing.

Cross section of the electric weld which fuses the wires into one homogeneous section, assuring unimpaired strength and maintained wire spacing.



Pittsburgh Steel Products Company supplies Welded Reinforcement for all types of concrete construction. This is no ordinary "steel reinforcement." It is an electrically-welded wire fabric of square or rectangular mesh, made from high grade cold-drawn steel wire of high tensile strength and proper ductile qualities.

The welding produces an absolutely rigid connection at every joint. Distortion of fabric is prevented and, since there are no wraps, ties or clips where members are joined, the concrete is allowed to flow freely around and completely cover every wire. The result is a perfect bond between concrete and reinforcement. Rolls are of lengths which provide an unbroken continuity of reinforcement extending across entire width of most buildings. Full effectiveness of reinforcement is thus obtained at every section of the slab, while the almost complete absence of laps and splices reduces the required quantity of steel to a minimum.

Practically any desired size of mesh and gauge of wire may be obtained. (See table of standard styles.) This wide range of selection adapts the material to a multitude of uses, including reinforcement of all types of concrete floor slab construction, concrete driveways, sidewalks, retaining walls; beam and column wrapping; fireproofing of steel framework; temperature reinforcement in top or finish layer of cement or composition floors, etc.

**Method of ordering**—All orders for Pittsburgh Welded Wire Reinforcement should include the following necessary information: Gauge and spacing of both longitudinal and transverse wires (Style No.); length of roll or sheet; center to center width of roll or sheet; whether plain or galvanized finish; and if other than a "close overhang" is desired.

**finish**—Plain or Galvanized as specified. (Plain fabric will be shipped on all unspecified orders.)

**tensile strength**—Wire: Plain finish, 70,000-85,000 lbs. per sq. in.; galvanized finish, 55,000-70,000 lbs. per sq. in. Galvanized fabric available 70,000 lbs. or over if specified.

**widths**—Rolls or Sheets.

| Spacing Longitudinal Wires | Maximum Width |
|---|---|
| 2 in. | 80 in. |
| 3 in. | 114 in. |
| 4 in. | 148 in. |
| 6 in. | 156 in. |

All widths are measured from center to center of outside longitudinal wires. Transverse wires have close overhang (½″ or less) unless otherwise specified and are spaced 2, 3, 4, 6, 8, 12 or 16″ as required.

**roll lengths**—Stock lengths 100 to 300 ft., depending on style. Roll length may be specified on orders not shipped from stock.

**PITTSBURGH STEEL PRODUCTS COMPANY**

**A Subsidiary of Pittsburgh Steel Company**

**Grant Building—Pittsburgh 30, Pa.**

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